AMENDMENTS TO THE CLAIMS

Please amend claims 3-4, 8-9, and 13-15 as follows, without acquiescence or prejudice to pursue the original claims in a related application. Claims 1-2, 6-7 and 11-12 have been canceled. Claims 16-24 have been added. A complete listing of the current pending claims is provided below and supersedes all previous claims listing(s). No new matter has been added.

1-2.   (Cancelled)

3.   (Currently Amended) <u>A method for encoding elements of an electronic design, comprising:</u> ~~The method of claim 2, wherein recognizing one or more arrays further comprises:~~

   <u>generating a flattened hierarchy of a parameterized cell of the electronic design;</u>

   <u>selecting common and unique parameters of elements in the parameterized cell;</u>

   <u>recognizing one or more arrays in the flattened hierarchy, wherein an array comprises multiple instances of a shape, wherein recognizing one or more arrays further comprises:</u>

      determining delta values for the instances of the shape based on a distance from one instance to a neighboring instance; and

      determining instances that share delta values;

   <u>generating and storing a physical design quantization characteristic value from the selected common and unique parameters.</u>

4.   (Currently Amended) The method of claim <u>3</u> ~~1~~, wherein selecting common and unique parameters of ~~each~~ elements further comprises:

   identifying multiple instances of a shape;

   identifying parameters common to ~~each~~ instance<u>s</u> of the shape; and

   identifying parameters unique to ~~each~~ instance<u>s</u> of the shape.

5.   (Currently Amended) The method of claim 4, wherein generating the characteristic value comprises:

storing the common parameters in a field of a data structure associated with ~~each~~ an instance of the shape; and

~~for each instance,~~ storing the unique parameters in a field of the data structure associated with the instance.

6-7.   (Cancelled)

8.   (Currently Amended) <u>An apparatus for encoding elements of an electronic design, comprising:</u> ~~The apparatus of claim 7, wherein said means for recognizing one or more arrays further comprises:~~

<u>means for generating a flattened hierarchy of a parameterized cell of the electronic design;</u>

<u>means for selecting common and unique parameters of elements in the parameterized cell;</u>

<u>means for recognizing one or more arrays in the flattened hierarchy, wherein an array comprises multiple instances of a shape, wherein the means for recognizing one or more arrays comprises:</u>

means for determining delta values for the instances of the shape based on a distance from one instance to a neighboring instance; and

means for determining instances that share delta values;

<u>means for generating and storing a physical design quantization characteristic value from the selected common and unique parameters.</u>

9.   (Currently Amended) The apparatus of claim <u>8</u> ~~6~~, wherein said means for selecting common and unique parameters of ~~each~~ element<u>s</u> further comprises:

means for identifying multiple instances of a shape;

means for identifying parameters common to ~~each~~ instance<u>s</u> of the shape; and

means for identifying parameters unique to ~~each~~ instance<u>s</u> of the shape.

10.   (Currently Amended) The apparatus of claim 9, wherein said means for generating the characteristic value comprises:

  means for storing the common parameters in a field of a data structure associated with ~~each~~ an instance of the shape; and

  means for storing the unique parameters in a field of the data structure associated with ~~each~~ the instance.

11-12. (Cancelled)

13.   (Currently Amended) <u>A computer readable medium comprising instructions which, when executed by a computer processing system, cause the system to perform a method for encoding elements of an electronic design, the method comprising:</u> ~~The medium of claim 12, wherein the instructions, when executed, cause the system to perform the method of recognizing one or more arrays, the recognizing method comprising:~~

  <u>generating a flattened hierarchy of a parameterized cell of the electronic design;</u>

  <u>selecting common and unique parameters of elements in the parameterized cell;</u>

  <u>recognizing one or more arrays in the flattened hierarchy, wherein an array comprises multiple instances of a shape, wherein recognizing one or more arrays comprises:</u>

    determining delta values for the instances of the shape based on a distance from one instance to a neighboring instance; and

    determining instances that share delta values;

  <u>generating and storing a physical design quantization characteristic value from the selected common and unique parameters.</u>

14.   (Currently Amended) The <u>computer readable </u>medium of claim <u>13</u> ~~11~~, wherein the instructions, when executed, cause the system to perform the method of selecting common and unique parameters of ~~each~~ elements<u>,</u> the selecting ~~method~~ comprising:

  identifying multiple instances of a shape;

  identifying parameters common to ~~each~~ instance<u>s</u> of the shape; and

identifying parameters unique to ~~each~~ instance~~s~~ of the shape.

15.   (Currently Amended) The <u>computer readable</u> medium of claim 14, wherein the instructions, when executed, cause the system to perform the ~~method of~~ generating the characteristic value, the ~~method~~ <u>generating the characteristic value</u> comprising:

storing the common parameters in a field of a data structure associated with ~~each~~ <u>an</u> instance of the shape; and

~~for each instance,~~ storing the unique parameters in a field of the data structure associated with the instance.

16.   (New) The method of claim 3, wherein selected common and unique parameters of an element comprise layer, purpose, text, orientation, font and height.

17.   (New) The method of claim 3, wherein the delta values are stored in a hash table.

18.   (New) The method of claim 3, further comprising:

decoding the parameters in the characteristic value to draw the shapes of the parameterized cell.

19.   (New) The apparatus of claim 8, wherein selected common and unique parameters of an element comprise layer, purpose, text, orientation, font and height.

20.   (New) The apparatus of claim 8, wherein the delta values are stored in a hash table.

21.   (New) The apparatus of claim 8, further comprising:

means for decoding the parameters in the characteristic value to draw the shapes of the parameterized cell.

22.   (New) The computer readable medium of claim 13, wherein selected common and unique parameters of an element comprise layer, purpose, text, orientation, font and height.

23.   (New) The computer readable medium of claim 13, wherein the delta values are stored in a hash table.

24.   (New) The computer readable medium of claim 13, wherein the method further comprises:

            decoding the parameters in the characteristic value to draw the shapes of the parameterized cell.